Customer Analytics and Marketing Research: Antithesis and Synthesis

Abstract

Customer Analytics provide a new type of marketing knowledge in terms of modelling past and present customer behaviour. This paper considers how such knowledge might fit with more traditional *Marketing Research*. Considerable overlap in the knowledge-based capability of the two functions suggests a need for rationalisation, especially where organisational relationships lead to conflict over the resources assigned to each. Nine testable propositions are developed which suggest that a synthesis of these knowledge-based functions should, in fact, enhance the marketing capability and success of the firm.

Introduction

Since the first market exchange, traders have collected information about their customers. Such information has two primary uses, to improve the ability of the trader to handle future customer interactions and to suggest ways to gain new customers. In this paper, we use the term "People of Interest" (POIs) to signify anyone who has been or may become a customer, either through a direct exchange or indirectly through someone who conducts the exchange on their behalf. In the twentieth century, sets of information tools (Berinsky 2006) were developed which allowed marketers to have a more sophisticated understanding of their POIs. In this paper we focus on two such tools modernly recognised as marketing knowledge management (KM) functions - Marketing Research (MR) and Customer Analytics (CA). We develop a set of propositions that relate to the ways these two KM functions might be integrated for the benefit of the firm operating in business to consumer markets.

The AMA has defined MR as, "The function that links the consumer, customer, and public to the marketer through information--information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the method for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implications."(AMA 2007). MR expenditure is a major business cost; in the US alone in 2006 it accounted for over $US12b (Honomichl 2007). Broadly speaking MR functions to help firms understand their POIs and to provide knowledge that aids strategic decision making (Bednall *et al.* 2005). For this paper, MR refers to the collection of qualitative and quantitative information specifically for the firm, either as a continuous (e.g. tracking) study or for *ad hoc* projects.

The second function is CA. While customer information has always been available, Customer Relationship Management (CRM) systems focus on organising the firm around customers (Payne and Frow 2005). Such a system generates large volumes of POI data which, when appropriately warehoused, modelled (data mining) and deployed, underpin CA functions. While yet to rival MR in terms of expenditure, an estimate of $US823m expenditure on data mining alone (Elliott, Scionti and Page 2004) suggests considerable activity.

We draw a distinction between two types of interactions POIs may have with a firm, affecting the type of CA deployed. In the first type, the identity of the POI is not known or collected. A classic example is where a retailer collects only aggregated sales data from POIs at the point of sale for commodity items. In the second type of interaction, the identity of the POI is known or is collected as part of a transaction. Knowing and collecting POI identifiers enables a firm to build a relational database based on individual POIs and their households. The identification distinction differs from the classical transactional-relational distinction (Zahay *et al.* 2004). For example, a known customer might browse the website of a firm without the firm knowing his or her identity. Customers in transactional businesses may become known to the business through loyalty schemes. Behaviour modelling based on identified POIs is more detailed than where such data are based on unidentified POIs, The more detailed modelling can better support the development of micromarketing strategies.

Further information that is useful to support CA may broadly be termed Xenographics - that is, information obtained outside the firm that is descriptive of groups of POIs and which can therefore be used to help model CA data. Examples include demographics, geodemographics (Mitchell and McGoldrick 1994), exographics (Greene and Milne 2006) and syndicated market research. While the use of demographic information for modelling customer behaviour is hardly new, complex information systems such as geodemographics (e.g. Mosaic Australia 2007) have recently emerged, underpinned by powerful information technologies that support the synthesis of vast and complex datasets. Syndicated research is also not new, however research companies have begun to produce "single source" data capable of describing individuals or families on a range of behavioural, lifestyle, media usage, values and attitudinal data (e.g. Roy Morgan Research 2007). Such disaggregated data is necessary to avoid the ecological fallacy in modelling POI data (Clancy, Berger and Magliozzi 2003). In Table 1, we describe the types of POI data that can be modelled. Customer Analytics without Xenographic data are limited in terms of the market modelling that can be performed. As Table 1 shows, data based on identified POIs can be more richly modelled. Adding Xenographics allows for the estimation of likely POI response in a wide range of interactions. The few gaps relate to circumstances where "single source" data is unlikely to collect specific information. In particular, tracking studies in areas such as advertising recall are unlikely to be replicated by single source services as they cannot measure all marketing outcomes.

Antithesis of CA and MR

As Table 1 shows, CA is capable of replacing much MR information. Conversely, all of the POI information shown in Table 1 could be provided or estimated by traditional MR. In MR, automated data collection of POI-related information is possible (e.g. by in-home barcode scanning), however such data is more typically collected by conducting surveys of POIs. Yet, data based on survey questions that solicit POI recollections of past and future behaviour may be problematic in comparison with similar data collected by CA functions. This is because errors of human recall such as telescoping, projecting and omitting (Woodside and Wilson 2002). MR is better placed than CA to ask questions about POI activity with respect to competitor contact and marketing related activities like watching advertising . MR has advantages in combining qualitative and quantitative methods. Qualitative research methods used by MR are likely to generate better understandings and exploration of how consumers think and feel about new products or situations. Qualitative research may also be necessary to guide the construction of quantitative research.

Table 1 POI Modelling Influenced by Personal Identification and Xenographics

	POI data collected by the firm		**POI data plus Xenographics**	
POI Interaction	Non-identified	Identified	Non-identified	Identified
Purchase				
Transaction	X	X	X	X
History		X		X
Complaint	X	X	X	X
Inquiry/search	X	X	X	X
Loyalty redemption		X		X
Maintenance	X	X	X	X
Installation		X		X
Billing		X		X
Direct marketing		X		X
Mass Communication				
Received message				X
Understood message				
Medium received				X
Tracking				
Word of mouth				
Critical incident		X		X
Other				X
Intention				
Expressed				
Propensity		X	X	X
Attitudes				X
Values				X
Geodemographics		X	X	X
Exographics			X	X
Competitive activity				
Purchase				X
Inquiry/search				X
Switching propensity		X	X	X

Given that any CRM function must in any case collect POI data in order to manage internal functions such as inbound call centres, and given that the addition of Xenographics can produce potentially powerful insights, our first testable proposition is that *CA should be able to substitute for some if not most of the MR that is collected* (P_1). Despite these considerations of what appears to be a large overlap between the capabilities of CA and MR, the academic and business literature on each function is largely silent or myopic about the other. From an MR perspective, internal customer data, when modelled using MR can take a valuable place in customer insight departments (Callingham 2004) On the analytics side, Davenport (2006) refers to CA being used to hone MR results. Both authors note the problems with the co-ordination of the two functions so that the knowledge from both can be effectively utilised, "Achieving this will be a real battle for the future – and a bloody and political one it will be" (Callingham 2004) . In some other cases the potential for collaboration is identified, but poor implementation of either function makes system integration difficult (Nancarrow, Rees and Stone 2003). Cultural and organisational separation have also been cited as reasons why limited integration has occurred (Elliott, Scionti and Page 2004). This important set of factors

is further addressed in the next section, which examines influences enabling the desired situation – a synthesis of MR and CA.

Marketing Research and Customer Analytics: A Synthesis

To avoid overlap, reduce costs and to make the best use of information, some way of sharing and comparing knowledge is required within an appropriate organisational structure. We will first look at the organisational issues which are necessary to achieve this, then go on to describe knowledge sharing in organisations which are characterised by co-operation.

Organisational boundaries, decision rights, coordinating mechanisms and the presence or lack of social networks can enable or inhibit knowledge sharing (Kilduff and Tsai 2003, Tsai 2002). Reward systems and other incentives may motivate knowledge sharing (Hall 2001) although some research suggests otherwise (Bock and Kim 2002). Organisational cultures of learning, innovation, trust, collaboration and cooperation facilitate knowledge sharing while cultures of distrust, competition and the rewarding of individual knowledge inhibit knowledge sharing (Gold, Malhotra and Segars 2001). The perceived quality of interaction between MR and other business functions influences the effective use of MR (Moorman, Deshpande and Zaltman 1993). The quantity of interaction between marketing personnel influences trust which in turn influences the perceived quality of shared marketing intelligence (Maltz and Kohli 1996). Assuming similar relationships between CA and MR, we propose that *the perceived quality of interaction between personnel in each function mediates the relationship between trust and the quality of knowledge sharing/integration of MR with CA.* (P_2). Maltz and Kohli (1996) noted the importance of proximity of marketing units for greater interaction, increased trust and increased perceptions of marketing intelligence quality. Hence we propose that *the physical proximity of the MR and CA units positively influences the integration of knowledge from MR with knowledge in CA.* (P_3).

When there are cross-functional teams between other functions and the marketing function, integration between units is improved (Leenders and Wierenga 2002) . A similar outcome has been found with marketing managers and their involvement with MR (Malhotra and Peterson 2001). This suggests that inter-functional teams between CA and MR may improve knowledge integration. Thus, we propose that *the presence of cross-functional teams across the MR and CA units positively influences the integration of MR with CA for CRM* (P_4). In contrast, when marketing functions compete with one another for resources, less marketing intelligence is shared or integrated (Cadogan *et al.* 2005, Maltz and Kohli 1996, Maltz, Souder and Kumar 2001). The greater the power and influence of one of the functions over the other, the less likely personnel will be motivated to share knowledge across functions. Equality can be partly obtained through equal remuneration and equal promotion opportunities between employees in marketing and other functions, leading to improved knowledge integration (Leenders and Wierenga 2002). Thus we propose that *rivalry between MR and CA will mediate the relationship between the discrepancies in remuneration and promotional opportunities and the integration of knowledge* (P_5). Some for-profit firms are quite entrepreneurial in orientation, while others are less so. One useful typology identifies three main types of strategy (Miles and Snow 1978). The *Prospector* types are dedicated to scanning both the internal and external environments for new entrepreneurial opportunities. *Defenders* are likely to operate successfully in relatively stable markets where they look for greater efficiencies and quality to improve their prospects. The *Analyzer* has a strategy that combines elements of both. *Prospectors* are more likely to seek and use all types of market

research effectively and less likely to use it for internal political processes (Bednall *et al*. 2005). In contrast, *Defenders* were less likely to make effective use of MR. It is likely that such differences in orientation would also apply to an interest in and use of CA, assuming that the function can deliver new insights or an expanded market. If even greater insights can be gained by integrating MR and CA, it is likely that Prospectors would be most likely and Defenders least likely to favour co-operation. Hence, we propose that *Prospectors are more likely to support the integration of MR and CA than are Defenders. (P_6)*

Assuming co-operation, we ask what knowledge sharing and integration of MR and CA functions might look like? There are three main approaches to knowledge sharing (Hansen, Nohria and Tierney 1999, Wenger, McDermott and Snyder 2002). First, knowledge can be articulated, codified and stored in data warehouses for later retrieval, analysis and application. CA brings a discipline to this process which results in formal knowledge which can be shared. Second, knowledge sharing can take place during interpersonal communication leading to shared meanings and learning. Third, community-based sharing may lead to shared understandings that are useful for knowledge integration (Wenger, McDermott and Snyder 2002). Intranet technologies (e.g. Research Reporter 2007) are popular supporting mechanisms for such communities.

Hendriks (2004, p.6) cautioned that "knowledge sharing is not seen as pushing packages of existing knowledge back and forth, but as a process that requires not only knowledge of the bringing party but also of the obtaining party". Thus a sharer's perceptions of a receiver's knowledge needs and behaviours may influence sharer beliefs, attitudes and behaviours in knowledge sharing (Lichtenstein *et al.* 2007) . In addition, a receiver must be able to relate incoming knowledge to existing tacit knowledge to understand and assimilate it (Dixon 2002). This can be more difficult when sharers and believers have different perspectives or cognition (Lane and Lubatkin 1998). In this context, we propose that *firms which structure themselves around a market intelligence or customer insights function are better placed to make sense of these disparate sources of knowledge than are firms which have separate MR departments*. (P_7). A measure of this would be a level of confidence that marketing stakeholders have in the scope, consistency and usefulness of the knowledge they hold. The ultimate aim in fostering such knowledge integration is to improve business performance. Empirical research has shown an enhanced association between sharing customer information across the organisation and business performance when a CRM system enables such sharing (Jayachandran *et al.* 2005). A similar benefit should occur when MR and CA are effectively shared. Hence we propose, *there will be a relationship between the perceived integration of MR and CA functions and business performance.* (P_8). We propose that *such integration is more likely to be effective in firms where the customers are identified since both micro and macro marketing strategies are possible in such organisations*. (P_9)

Testing the Propositions

In a relatively small markets such as Australia and New Zealand, only a few business to consumer firms will be large enough to have a dedicated market research function and large customer databases. Such a domain is suitable for case study research, however the research may need to be taken to larger markets such as the US for our propositions to be tested quantitatively.